



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,964	09/24/2003	Yukihiko Minamida	031206	1481
23850	7590	12/07/2007	EXAMINER	
KRATZ, QUINTOS & HANSON, LLP			SERGENT, RABON A	
1420 K Street, N.W.			ART UNIT	
Suite 400			PAPER NUMBER	
WASHINGTON, DC 20005			1796	
			MAIL DATE	DELIVERY MODE
			12/07/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/668,964
Filing Date: September 24, 2003
Appellant(s): MINAMIDA ET AL.

MAILED
DEC 07 2007
GROUP 1700

Daniel Geselowitz, Ph.D.
For Appellant

EXAMINER'S ANSWER

This is in response to the Appeal Brief filed August 22, 2006 and the Response to Non-Compliant Appeal Brief filed March 7, 2007 appealing from the Office action mailed April 3, 2006.

Art Unit: 1711

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

It is noted that von Bonin et al. (U.S. Patent 4,411,262) has additionally be relied upon, as referenced by Lee et al. (U.S. Patent 4,574,793).

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

U.S. 4,411,262	von Bonin et al.	10-1983
U.S. 4,574,793	Lee et al.	3-1986

Art Unit: 1711

U.S. 6,844,073

Helmeke et al.

1-2005

Oertel; Polyurethane Handbook: Chemistry - Raw Materials - Processing - Applications - Properties; Hanser Publishers; New York; 1985; pp. 96 and 97.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Helmeke et al. ('073) in view of Lee et al. ('793) or Oertel, with Lee et al. ('793) being further in view of von Bonin et al. ('262) (It is noted that von Bonin et al. ('262) was referenced within the prior art rejections of the Office actions of July 1, 2005 and April 3, 2006; therefore, its formal recitation within the rejection does not constitute a new ground of rejection).

Helmeke et al. disclose moisture curable hot melt polyurethane adhesives, wherein the adhesives comprise polyurethane prepolymers, derived from aliphatic or aromatic polyisocyanates, including diphenylmethane diisocyanate, and polyester polyols. Patentees further disclose that the polyester is derived from polyols and phthalic acid. Furthermore, morpholine ether catalysts are disclosed as being preferred catalysts. See abstract; column 1, lines 50-59; column 2, lines 50+; column 3, lines 1-4 and 65+; column 4, lines 44-53; and examples.

Helmeke et al. are silent regarding the incorporation of sulfonic acids into the adhesive compositions; however, sulfonic acids were known inhibitors for isocyanate reactions, especially in the presence of amine catalysts, such as applicants' claimed morpholine ether catalyst. This position is supported by the teachings of Oertel at pages 96 and 97 and Lee et al. (see abstract). It is noted that Lee et al. disclose at column 6, lines 50-53 that alternative prepolymer embodiments may be employed, such as those disclosed within U.S. Patent 4,411,262 (U.S. Patent 4,411,262 discloses polyurethane prepolymers derived from polyester polyols, including phthalic acid derivative derived polyols (see column 4, lines 64+)). It is additionally noted that Helmeke et al. teach at column 1, lines 29-43 that it is advantageous to control the open time of the adhesive; therefore, the position is taken that this disclosure provides additional motivation to utilize components that would control or moderate the open time, such as the known inhibitors of the secondary references. Therefore, the position is taken that it would have been obvious to incorporate sulfonic acids into the amine catalyzed polyurethane prepolymer adhesives of the primary reference, so as to control open time and extend shelf life, potlife, and workability of the adhesive.

(10) Response to Argument

Appellants have provided arguments based on the disclosures of the references and the results set forth within the relied upon 37 CFR 1.132 declarations.

Appellants' arguments and the examiner's responses with respect to the disclosures of the references are as follows. Firstly, appellants argue that the catalyst of Helmeke et al. is an optional component and that the examples of Helmeke et al. do not utilize a morpholine ether catalyst. In response, it is not seen that applicants' arguments establish that the morpholine ether

Art Unit: 1711

catalyst is not a preferred component. Review of the disclosure at column 4, lines 44-56 indicates to one of ordinary skill that appellants' morpholine ether catalyst is a preferred component of the adhesive. Upon reading the passage, one would conclude that it is advantageous to use a morpholine ether catalyst in an amount of from 0.01 weight percent to 2.0 weight percent. It has been held that a prior art reference is good for all that it teaches, and the silence of the examples of the reference with respect to the argued catalyst does not negate the fact that it is disclosed and that it is disclosed as a preferred catalyst. Clearly, one of ordinary skill in the art upon reading Helmeke et al. would conclude that Helmeke et al. were in possession of an adhesive composition that comprises applicants' morpholine ether catalyst. Were it not for the fact that Helmeke et al. fail to disclose appellants' sulfur atom containing acid component (C), the reference would be anticipatory. Secondly, appellants have acknowledged that Lee et al. disclose the combination of morpholine ether catalyst and methane sulfonic acid, yet argue that Lee et al. fail to disclose or suggest a prepolymer made from a polyester polyol. In response, appellants have failed to appreciate the fact that Lee et al. disclose at column 6, lines 50-53 that the prepolymers of von Bonin et al. (U.S. 4,411,262) may be used in their invention and it is noted that these prepolymers are derived from polyester polyols, including phthalic acid based polyester polyols. Therefore, contrary to appellants' arguments, Lee et al. do disclose the use of polyester derived prepolymers with the combination of morpholine ether catalyst and methane sulfonic acid. Lastly, appellants' arguments with respect to Oertel are not well taken. Appellants suggest that Oertel is only relevant for the preparation of prepolymers; however, the chemistry of the isocyanate group is well known and one would reasonably expect the disclosed compounds to inhibit virtually any reaction of the isocyanate group with polyols, regardless of

Art Unit: 1711

whether a prepolymer or other product is being formed. Contrary to appellants' view, the examiner sees no reason why the teaching of Oertel should be so narrowly interpreted.

Appellants' arguments and the examiner's responses with respect to the results set forth within the relied upon 37 CFR 1.132 declarations are as follows. It is noted that appellants' arguments are primarily drawn to the 37 CFR 1.132 declaration filed February 27, 2006 (Appellants' Declaration II); however, for the sake of completeness, the examiner has included a discussion of the 37 CFR 1.132 declaration filed April 13, 2005.

Discussion of Appellants' Declaration I

The examiner has considered the 37 CFR 1.132 declaration of April 13, 2005; however, the declaration is insufficient to overcome the prior art rejection for the following reasons. Firstly, the declaration is not commensurate in scope with the claims, with respect to species and quantities of components. Secondly, appellants' results are not unexpected. The most relevant comparison stems from a review of Comparative Example 3 and Example 1, wherein the difference appears to be that Example 1 employs a sulfonate compound (it is noted that the methane sulfonate does not correspond to the claimed acid compounds, so the declaration is additionally deficient for this reason). The results of this comparison are what one of ordinary skill in the art would expect, considering the disclosed function of the inhibitor compounds. Specifically, Example 1 displays a slower viscosity build and decreased creep resistance, suggesting a longer open-time. Since sulfonic acid inhibitors retard the reaction, these are exactly the results that one would expect from its addition to the adhesive composition.

Discussion of Appellants' Declaration II

The examiner has considered the 37 CFR 1.132 declaration of February 27, 2006; however, the declaration is insufficient to overcome the prior art rejection for the following reasons. Firstly, despite appellants' arguments within pages 19 and 20 of the Appeal Brief, this second declaration is also not commensurate in scope with the claims, with respect to species and quantities of components. It has been held that to overcome a reasonable case of *prima facie* obviousness, the claims must be commensurate in scope with any showing of unexpected results. *In re Greenfield*, 197 USPQ 227. Furthermore, it has been held that a limited showing of criticality is insufficient to support a broadly claimed range. *In re Lemin*, 161 USPQ 288. The position is taken that appellants' declarations (I and II) fail to meet these standards. For example, appellants' exemplified polyisocyanate is based on MDI or a specific derivative of MDI (Isonate 143LJ), all aromatic polyisocyanates; however, appellants' claims are not so limited. Both the instant claims and the primary reference encompass other types of isocyanates, such as aliphatic polyisocyanates; therefore, commensurate in scope showings require that other types of isocyanates be set forth. This is especially important in the instant case where rates or speed of reaction are at issue, since aliphatic polyisocyanates are less reactive than aromatic polyisocyanates. Since one would clearly expect systems based on aliphatic isocyanates to have a different reaction profile than systems based on aromatic isocyanates, any meaningful showings would have to include them, where the claims and prior art in question do not exclude them. Furthermore, in response to appellants' arguments within page 18 of the Appeal Brief, it has been held that where a comparative standard may be used, the comparison must relate to the prior art embodiment relied upon and not other prior art. *Blanchard v. Ooms*, 68 USPQ 314. In

Art Unit: 1711

other words, appellants' comparative examples must be representative of the closest available prior art, specifically, Helmeke et al. With respect to the declaration of February 27, 2006, Comparative Examples (2) and (3) lack components possessed by Helmeke et al. Specifically, Comparative Example (2) lacks the catalyst and Comparative Example (3) lacks the phthalic acid based polyester polyol. Therefore, these Comparative Examples are not representative of Helmeke et al. and are not considered to be relevant to the issues at hand. The significance of the catalyst teaching within Helmeke et al. has been discussed previously, and the position is taken that a relevant comparative showing must reflect these teachings. Accordingly, the only relevant comparison is that of Comparison (1), and, contrary to appellants' argument within page 19 of the Appeal Brief, the position is taken that this comparison fails to demonstrate an unexpected result. As with the previously argued comparison of the previous declaration, Comparison (1) is considered to demonstrate exactly what would have been expected by one of ordinary skill in the art. Example (1), containing the methanesulfonic acid reaction inhibitor, displays a slower reaction profile, in terms of slower viscosity build. Again, since sulfonic acid inhibitors retard the reaction, these are exactly the results that one would expect from its addition to the adhesive composition.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


RABON SERGENT
PRIMARY EXAMINER

Art Unit: 1711

Conferees:



Supervisory Patent Examiner James Seidleck

Supervisory Patent Examiner Jennifer Michener



JENNIFER MICHENER
QUALITY ASSURANCE SPECIALIST